

VALIDATION OF EMPLOYEE'S TRUST IN LEADER'S SCALE IN INDIAN IT SECTOR

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ABSTRACT

Trust is considered essential for personal as well as professional interactions among individuals and organizations. The literature demonstrates the importance of employee's trust in their leaders to lead in this competitive global scenario. The researcher has validated the short version of 'employee's trust in leaders' which was earlier developed and validated by the Vidotto, Vicentini, Argentero, Bromiley (2007) on the Italian population to measure the organizational trust of employees and at the same time recommended to measure employee's trust in leaders also. The trust scale measures three dimensions originally defined by Bromiley and Cummings (1995): keep commitments, negotiate honestly, and not taking excessive advantage. This study presents the perfect validated short version of scale to test the employee's trust in leaders. The research has been applied on the 320 employees of information technology industry in India that is entirely different country from the Italy in the form of social, cultural, demographical, geographical, and legal and power distribution structure. The study has used AMOS 21 to do a confirmatory factor analysis of the scale. The results have been demonstrated perfect model fit indexes, reliability and validity of the scale.

KEYWORDS: Trust in Leaders, Confirmatory Factor Analysis, Keep Commitments, Negotiate Honestly & Validity

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1. INTRODUCTION

Trusting relationship in any organization works as an important tool to gain competitive advantages in an increasingly global economy. Research has demonstrated that the organization develops the internal and external environment of trust gets more benefits in the market place in comparison to others. It shows that trust is an essential element for the success of an organization in present scenario. Trust significantly improves relations among the partners and reduce uncertainty of failure of negotiation. Trust not only improves internal relation of the employee, but also develop a strong bonding with the external referents. The researchers have linked trust with number of outcomes as lower employee turnover and higher sales and profit (Davis, Schoorman, Mayer, & Tan, 2000). Trust is social concept which influences people to come together and work together. Basically it can be say that center of interaction with others, is trust (McKnight and Chervany, 1996). Mayer, Davis, & Schoorman, (1995) define trust as, "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trust or, irrespective of the ability to monitor or control that other party" (p. 712). Not only for the organization, but also trust is a crucial element of an effective leadership. Taylor (2000) states, "leaders are creators of the conditions within which the staff work" (p41). Employees follow their leaders when they find them trustworthy and authentic. Trust develops through transparent relationships between leader and followers. To develop trust between leader and followers, the leader should make positive effort to motivate his followers or team members. A leader should adopt an empathic

approach to admit his/her mistakes, participate and discussion, evaluate his/her own behaviour, avoid ambiguous statement, do not jump to the conclusion. A leader who keeps his promises and believes and does not give false commitment, avoid highlighting weaknesses of others and negotiate honestly has highest probability viewed as trustworthy leaders. Trustworthy leaders can motivate followers to accomplish organizational goals and objectives. It can be said that the trust in leaders through their followers creates positive and healthy environment in the organization which ultimately increase overall performance of the organization. Podsakoff, Mackenzie, and Bommer (1996) also explored that subordinates shows high level of trust towards the leaders, who provides an individual support, behave as a role model and give emphasis to acceptance group goals.

Das & Teng, (2001) said that trust is a multilevel construct which can be examined at a personal, organizational, inter-organizational and the international level. Trust has been examined or examining at various level as organizational level, group level and individual level as trust in leaders. Trust in leaders is an important concept in this competitive environment to be examined. Although number of researchers has worked and working in this direction. Number of scales has been already developed to measure the trust in leaders but the researcher wants to validate the short version organizational trust inventory developed by the Vidotto, Vicentini, Argentero, Bromiley (2007) on the Italian population and suggested to use to measure employee's trust in leaders. The trust inventory short version developed by Vidotto et.al. (2007) measures three dimensions of trust originally defined by Bromiley and Cummings (1995): keep commitments, negotiate honestly, and not taking excessive advantage. They also attached three dimensions of the inventory with the three components of human behavior- cognition, affect and intended behavior. Vidotto et.al. (2007)) tested the same pattern on the Italian population to develop a short version of the scale. Vidotto et.al. (2007) not only developed or validated the scale to measure the trust at organizational level but also suggested to use this scale to measure trust in leader, trust in subordinates, colleagues and team. Now the researcher wants to validate the Vidotto's short version of scale to measure trust in leaders in the information technology industry in India. Indian working environment in terms of economic, legal, technological, and social cultural is entirely different from the Italian environment. India is a large country in terms of geographical and demographical factors in comparison to Italy. Relationship structure which Indian companies follow is entirely different. The information technology industry in India is one of the revenue generating industry, which covers 67 percent, approximately of the US\$ 124-130 billion market. It represents India as a world's largest sourcing place for the information technology (IT) industry. To be developed more or to be a leader in this industry sector needs to establish trust, healthy and positive work environment. So in this respect, it is mandatory for the industry to develop a strong relationship structure between leader and followers to achieve required targets. For this purpose it is necessary to increase the relationship bonding between leader and followers. Literature reveals the facts that relationship gets stronger when the followers find their leader trustworthy. It means trust is a key of a successful relationship between leader and followers.

2. OBJECTIVE OF THE STUDY

The objective of this research paper is to validate the short version of OTI scale which is suggested to measure 'trust in leaders' by Vidotto et. al. (2007). The researcher will validate the scale in Indian relationship structure for measuring employees' trust in leaders.

3. INSTRUMENT

The instrument which is the source of this research paper is Vidotto et.al. (2007) 'OTI short version' which was also recommended to test the employee's trust in leaders. Prior to this Bromiley and Cummings have scaled the OTI on

three main dimensions. Keeping commitments, negotiate honestly and not taking excessive advantages to measure organizational trust between two parties which was further adopted by Vidotto et.al. (2007) to develop short version as well as long version of scale with some changes on the Italian population. He suggested that this scale can be used to measure trust in leaders, subordinates, groups, and colleagues. He used three dimensions and described them as **Keeping Commitments to keep their commitments and promises high which develop trusting relationships. Not Taking Excessive Advantages to not to take benefits from others for their personal interest. And Negotiating Honestly to be a part of faire negotiation** means both the parties follows the honesty in negotiation. He suggested that all the three dimensions can be used to measure employee's trust in leaders. In the reference of trust in leaders scale, the leader should not cheat their followers and work for their well-being. The researcher has taken the short version of the OTI scale to validate this scale to measure the employee's trust in leaders. The English version of the scale has been applied on the Indian population. The researcher has changed the respective expression "we feel" to "I feel". The main change which has been done, are the conversion of "We with I" as the purpose is to use this scale to measure trust in leaders.

4. RESEARCH METHODOLOGY

4.1. Research Design

The study is quantitative and non-experimental (descriptive) in nature. The data for the study has been collected through the cross sectional survey method (Creswell, 2012; Best & Kahn, 2006).

4.2. Population and Sample Size of the Study

The population of the study includes employees working in the information technology industry in Delhi NCR, where approximately 30% of the total IT work force are located in India (NASSCOM, 2015). The sample size obtained for the study is 320 which is adequate for the study as the guidelines proposed by Hair et al. (2010) indicates that the sample size should be at least 5X the number of observations to be analysed and more appropriate is 10 times of the number of observations. To perform confirmatory factor analysis 320 data are appropriate as per the guideline discussed above.

4.3. Sampling Techniques

The study has used the convenience sampling technique, type of non-probability sampling to collect the data. Description of sample.

4.4. Description of Sample

As the data was collected at the follower's level, the returned questionnaire was 355 in total. While entering the data in SPSS, out of 355 questionnaires, 35 had missing or bad data, so those questionnaires were not considered for the analyses. The final sample received for the analyses were 320, yielding a 41% response rate. The required sample size of the study was 384 (according to sample size calculator (2004)). 320 data were considered for the analysis, which is 83.33% of the desired sample size 384. From 320 participants, the majority of the respondents were male i.e 240 (75%) and 80 (25%) were females working in 17 small, medium and large sized information technology companies. Out of the total 320 employees in terms of age, 142 (44.4%) were 30-40 years age group which is maximum of the total employees of the study, 116 (36.25%) were between 20-30 years, 54 (16.87%) were between 40-50 years, 8 (2.5%) were 50 years and above. In terms of experience in a number of years, 174 (54.37%) employees were in the category of experience group 2-10 years, which was the maximum percentage of the total employees of the study, 118 (36.87%) between 10-20 years of experience, 22 (6.88%) between 20-30 years of experience, and 6 (1.86%) of employees had more than 30 years of

experience.

5. STASTICAL ANALYSIS

The researcher has used structural equation modelling through AMOS 21 to do confirmatory factor analysis. The study has fulfilled all the assumptions required by SEM as the treatment of missing data, outliers and data normality. Outliers has been checked through the Mahlalesen distance test and removed those data values from the data set as same with the missing values. Normality check has been done through the measure of skewness and Kurtosis for every item. The recommended values for skewness and kurtosis have been considered as maximum 2 and 7 respectively suggested by Curran et al. (1996) and Kline (2011). To validate the scale it is required to achieve model fit indexes as suggested by Hair et. al. (2010) the following Table 1 threshold value of goodness of fit is used to assess the best model fit.

Table 1: Required Model Fit Indexes

Name of Index	Level of Acceptance	Comments
RMSEA	RMSEA < 0.05	<.05 Good; sometimes <.08 permissible
GFI	GFI > 0.90	>.95 great; >.9 acceptable
AGFI	AGFI > 0.80	>.90 great; >.8 acceptable
RMR	RMR < 0.05	<.05 Good; sometimes <.08 permissible
Chisq/df	Chi square/ df < 5.0	<3.0 Good; sometimes <5.0 permissible
CFI	CFI > 0.90	>.95 great; >.90 acceptable
TLI	TLI > 0.90	>.95 great; >.90 acceptable
NFI	NFI > 0.90	>.95 great; >.90 acceptable

The study also reported reliability through construct reliability and average variance extracted. Validity has been reported in the form of convergent, discriminant and content validity of the measurement model to validate the scale in Indian IT sector.

6. MEASUREMEMNT MODEL

The study assessed measurement model for the all the three construct together through the confirmatory factor analysis. After preparing all the data, the researcher has run the measurement model and did the confirmatory factor analysis for the model. **Confirmatory factor analysis (CFA)** is a statistical technique, generally used in social science research. It is used to validate the factor structure of a set of observed variables which specifies that measures of a construct are consistent with a researcher's awareness of the nature of that construct.

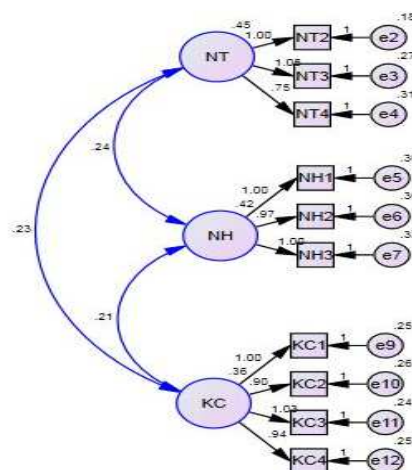


Figure 1: Measurement Model

6.1. Achieved Model Fit Indexes to Validating Measurement Model

The study has achieved all required model fit indexes can be seen through the Table 2. The values achieved shows the excellent model fit as the all the values are higher than their minimum required level which has been suggested by the Hair et. al. (2010), given in Table 1.

Table 2: Result Summary from Confirmatory Factor Analysis

Name of Index	Actual Values	Recommended Values
RMSEA	0.031	RMSEA < 0.05
GFI	0.974	GFI > 0.90
AGFI	0.956	AGFI > 0.90
RMR	0.023	RMR < 0.05
Chisq/df	1.305	Chi square/ df < 5.0
CFI	0.993	CFI > 0.90
TLI	0.990	TLI > 0.90
NFI	0.969	NFI > 0.90

The value of Chisq/df is (CMIN/df = 1.305), the adjusted goodness of fit (AGFI=0.956), the goodness of fit index (GFI=0.974), the normed fit index (NFI =0.969), comparative fit index(CFI=0.993), tucker-lewis index (TLI=0.990), root mean square residual (RMR=0.023) and the root mean square error of approximation (RMSEA=.031) which demonstrate the perfect model fit. To reach at the perfect model fit indexes, the study has been evaluated all the factor loading less than 0.6, and found two items having less than values 0.6. After that those two items has been deleted to reach at this level of model fit indexes can be seen in Table 3.

6.2. Assessment of Validity and Reliability for a Measurement Model

After achieving the model fit statistics, it was essential to evaluate whether the unidimensionality, reliability and validity measurements has been established or not.

Table 3: Reliability and Validity Measurement Table

Dimensions	Items	Factor Loading	CR	AVE
Not Taking	NT1	Deleted	0.822	0.609
	NT2	0.848		
	NT3	0.808		
	NT4	0.674		
Negotiate Honestly	NH1	0.76	0.800	0.568
	NH2	0.752		
	NH3	0.749		
	NH4	Deleted		
Keep Commitment	KC1	0.769	0.842	0.572
	KC2	0.727		
	KC3	0.783		
	KC4	0.746		
Notes: NT1 & NH4 items were deleted due to low factor loading				

Unidimensionality

The unidimensionality achieved after the deletion of low factor loading items from the construct. As the Table 3 shows there was two low factor loading items in the scale as one was in construct's name 'not taking excessive advantage' and 'negotiate honestly'. The study has adopted indicators having the loading more than .6, suggested by Hair et. al. (2010) that no loading should be considered as less than .05. This requirement has been achieved after deleting two items from the

scale.

Reliability

Reliability can be measures through the values of **Composite Reliability(CR)** which measures the internal reliability and consistency of the construct and the value must be greater than 0.70 (Hair et. al., 2010) and the values of **Average Variance Extracted (AVE)** which shows the average percentage of variation explained by the measuring items for a construct, value must be greater than 0.50 (Hair et. al., 2010). The Table 3 has shown the values of the Composite Reliability and Average Variance Extracted (AVE) for not taking excessive advantages (0.822 & 0.609), negotiate honestly (0.800 & 0.568) and keeping commitments (0.842 & 0.572) greater than 0.70 & 0.50, which indicates that the scale has achieved the requirement of composite reliability as well as average variance extracted (AVE) suggested by Hair et. al. (2010).

Validity

Convergent validity is the degree to which a specific set of indicators converge to measure a construct. This validity attains when all indicators are found to be statistically significant

This requirement has been achieved through the following process suggested by Hair et. al. (2010). -

- Composite Reliability (CR) greater than 0.70,
- Average Variance Extracted (AVE) greater than 0.50, and
- Composite reliability must be higher than Average Variance Extracted (CR>AVE).

The study has been achieved as per requirement can be seen in the Table 3. The study has achieved the Composite Reliability (CR) for every construct greater than 0.70 and Average Variance Extracted (AVE) for every construct greater than 0.50 (Hair et. al., 2010). The Composite Reliability (CR) of every construct has been achieved greater than the Average Variance Extracted (AVE) of every construct.

Construct Validity has been achieved as all the fitness indexes for the model reached at their required level as Table 3 can be referred.

Discriminant Validity achieves when a specific item measures the specific dimensions and not to load on other dimension. It should not be correlate with other constructs (Campbell and Fiske, 1959) for establishing discriminant validity of the model it is required to fulfill the following conditions as Average Variance Extracted(AVE) must be greater than Maximum shared variance (MSV). Fornell-Larcker (1981) criteria have been used to measure the discriminant validity. The values of Maximum Shared Variance (**MSV**), has been also used to establish discriminant validity which should be less than from the Average variance extracted (**AVE**). As table shown that the Average Variance Extracted (AVE) of not taking excessive advantages (0.609), negotiate honestly (0.568) and keeping commitments (0.572) greater than the Maximum Shared Variance (MSV) of not taking excessive advantages (0.324), negotiate honestly (0.311) and keeping commitments (0.556). The correlation values between two constructs should not be more than 0.850. As the Table 4 shows the discriminant validity, and interrelation between constructs which indicates no correlation is more than 0.85 and all the values of AVE and MSV as its required level.

Table 4. Discriminant Validity Index Summary

Inter-correlation and Discriminant Validity Index Summary									
	Mean	St. Deviation	CR	AVE	MSV	MaxR(H)	NH	NT	KC
NH	5.139	0.584	0.798	0.568	0.311	0.798	0.754		
NT	5.349	0.624	0.822	0.609	0.324	0.841	0.558	0.780	
KC	5.060	0.556	0.843	0.572	0.324	0.844	0.538	0.569	0.757
**. Correlation is significant at the 0.01 level (2-tailed)									

The results indicates that the scale has been achieved desired level of reliability and validity. The lower correlation also indicates that all the three constructs of the scale have their own identity.

7. DISCUSSIONS

This study validated the organizational trust inventory (short version) which was also suggested to use to measure employee's trust in leaders by Vidotto et.al. (2007). The researcher has validated this short version of the trust inventory to measure the employee's trust in leaders in the informational technology industry in India. And surprisingly, this trust inventory found an excellent fit to measure employee's trust in leaders. The results of scale validation study indicate that it can be used to test employee's trust in leaders. Vidotto et.al. (2007) has used this scale on Italian population which is entirely different from the India in terms of power, social, legal and geographical structure. And results indicates that scale achieved all required model fit indexes, reliability and validity after deleting two items from the construct's name as negotiate honestly and not taking excessive advantages respectively and received perfect fit model as earlier achieved by the Vidotto et.al. (2007). Results of Vidotto et.al. (2007) had achieved perfect model fit indexes but the correlation between constructs was very high ($r = 0.85, 0.86, 0.96$ respectively). The correlation between constructs should not be more than 0.850 as the literature suggests. But the present study has been achieved perfect discriminate validity and no correlation between constructs has been found more than .085. So each and every construct in the present study have its own identity and not showing inter-correlation to each other. The findings of this study indicate that the scale perfectly measures employee's trust in leaders in the information technology industry in India and can be used to measure employee's trust in leaders in another sectors too.

8. CONCLUSIONS

The study has validated the scale 'trust in leaders' in Indian information technology industry. The scale has achieved all required modification indexes, reliability and validity after deleting two items from the previous scale. The scale can be useful to measure employees' trust in leaders not only in information technology industry in India but also in other sectors and cultures too. The researcher suggests validating the long version of the same scale to measure employees' trust in leaders in India as well as other cultures.

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APPENDICES

The new versions of the instrument, in the 'I' formulation of the questionnaire items

-
- I feel i can depend on my immediate supervisor to negotiate with me honestly.
 - I feel i cannot depend on my immediate supervisor to fulfill its commitments to me.

- I think that my immediate supervisor negotiate agreements fairly.
- I feel that my immediate supervisor is straight with us.
- I think that the people in my organization succeed by stepping on other people.
- I think my immediate supervisor keeps the spirit of an agreement.
- I feel that my immediate supervisor will keep its word.
- I think that my immediate supervisor takes advantage of my weaknesses.
- I think that commitments made to my immediate supervisor will be honored by the people in organization.
- I feel that my immediate supervisor takes advantage of people who are vulnerable.

*The tool used 7-point Likert scale as given:- 1 – Strongly Disagree, 2 – Disagree, 3 – Slightly Disagree, 4 – Neither Agree nor Disagree, 5 – Slightly Agree, 6 – Agree, 7 - Strongly Agree

Table 5: New Scale Item Description

Dimensions	Item#	Comments
Not Taking	5	Reverse Question
	8	Reverse Question
	10	Reverse Question
Negotiate Honestly	1	
	3	
	4	
Keep Commitment	2	Reverse Question
	6	
	7	
	9	

